AN EVALUATION OF THE NEED FOR A FULL-TIME HEALTH AND SAFETY OFFICER WITHIN UNITED STATES AIR FORCE FIRE DEPARTMENTS

Executive Development

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ABSTRACT

United States Air Force (USAF) Fire departments did not have a position specifically authorized for a department Health and Safety Officer (HSO). The purpose of this paper was to assess the need for a specific manpower authorization for a HSO.

The methodology used to look at these requirements involved a literature review of the pertinent materials contained in the National Fire Academy's (NFA) Learning Resource Center (LRC), documents contained in the Royal Air Force (RAF) Mildenhall Fire Department reference library, and information located on the Internet in an evaluative research effort to answer the following questions:

1. What manpower authorizations currently exist for USAF fire departments?
2. What functions are involved in the HSO's duties?
3. How do fire departments currently manage their safety program?
4. What guidelines are needed for developing a full-time HSO position description?

The results revealed that though no fire department has a specific, dedicated HSO position earned for their department, each department has assigned a member of their department as the HSO. Each of the major installations queried has a full-time HSO, establishing the position by taking a position from another area of the department, such as operations, and providing a full-time, dedicated HSO. Of the 9 departments involved in the questionnaire, 7 indicated there is a need for a specific position to be authorized. The recommendation provided was that fire chiefs continue to assign a full-time HSO when possible, and that senior fire protection leaders establish criteria to determine when a HSO position should be earned and authorized.

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INTRODUCTION

The mission of the fire service is a dangerous one, exposing fire fighters to products of combustion, hazardous chemicals, and explosive atmospheres. The "nature of the business" places the fire fighter in jeopardy whenever responding to emergencies. In an effort to reduce the risk of injury and death, a HSO is required in each fire department to provide for the safety of fire fighters in routine daily functions, as well as during emergency operations.

The problem is the USAF does not consider HSO responsibilities to require a full-time manpower authorization. The purpose of this paper was to assess the need for a specific manpower authorization for a HSO.

A literature review of the pertinent materials contained in the NFA LRC, documents contained in the RAF Mildenhall Fire Department reference library, and information located on the Internet were used in an evaluative research effort to answer the following questions:

1. What manpower authorizations currently exist for USAF fire departments?
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BACKGROUND AND SIGNIFICANCE

Since the Department of Defense (DoD) and the USAF directed and adopted all National Fire Protection Association (NFPA) standards in 1991, one of the primary NFPA standards to impact all fire departments is NFPA 1500, Standard on Fire Department Occupational Safety and Health Program. This standard became the foundation for the

safety program of all USAF fire departments, with specific phase-in dates established for compliance with the requirements of the standard.

When NFPA 1500 was adopted as the standard whereby all USAF fire departments would manage their safety program, there was no action taken to provide a position in the Air Force Manpower Standard (AFMS) 44EF manpower document for a full-time HSO to manage the program (AFMS 44EF, September 1996, pg. 25). In fact, there was little consideration given by senior fire protection leaders regarding the implementation of these standards. Fire chiefs were left to their own imagination in designing compliance programs to meet the requirements of NFPA 1500. The Chief of Air Force Fire Protection said that senior fire protection leadership, consisting of major command fire chiefs and senior Air Force officers, did not feel it was necessary to provide for a dedicated HSO within Air Force fire protection (J. W. Hotell, personal communication, September 14, 1998). This left fire executives with the dilemma of complying with a mandated program without the staffing to do it. They had to work within their current manning authorizations to provide direction and oversight for the safety program, and they did it in a variety of ways.

In the United States Air Forces Europe (USAFE), there are 12 USAF installations that provide a variety of mission activities. Five of these installations are Main Operating Bases (MOBs) with large flying missions, while the remaining seven are considered support installations. MOBs also provide support and direction to the support installations attached to them. Local national fire fighters are employed at 11 of these installations, consisting of German, Spanish, British, Turkish and Italian citizens. To meet the unique safety requirements for these departments, staffing for the HSO position was tailored to the needs and the capabilities of each department. This presented the unique challenge of

incorporating host nation safety requirements into their programs to meet the demands of foreign national laws.

So, fire chiefs adapted to the restrictions imposed upon them and implemented their safety programs. The methods for achieving this were varied; some assigned a dedicated HSO from within the manpower authorizations assigned to the department, while others made the task an additional duty. Fire chiefs continue to raise the issue of the HSO at conferences and meetings, but nothing has favorably resolved the problem.

Public Law 104-113, section 12 (d), codifies Office of Management and Budget (OMB) Circular A-119 requiring federal agencies to adopt and use standards developed by voluntary consensus standards bodies and to work closely with those organizations to ensure that the developed standards are consistent with agency needs (The National Technology Transfer and Advancement Act of 1995). In a proactive move to improve protection for USAF people and resources, Air Force Policy Directive (AFPD) 32-20 was written to guide fire protection policy within the USAF, prior to the enactment of The National Technology Transfer and Advancement Act of 1995. This directive says, “The Air Force will ensure its fire protection operations comply with all applicable national, state, local, and Department of Defense (DoD) regulations, as well as National Fire Codes published by the National Fire Protection Association (NFPA)” (AFPD 32-20, 1994, p. 1).

Since the adoption of NFPA 1500 by the USAF in 1991, fire chiefs have had to determine how to best provide a HSO for their department. In 1996, AFMS 44EF was revised without the authorization for a HSO (p. 25). The requirement for the HSO was clearly known before the publication of the standard, however, senior USAF fire protection and manpower agency leaders determined that safety could be managed as an additional

duty within the fire organization, as is allowed by NFPA 1500 and NFPA 1521, Standard for Fire Department Health and Safety Officer (J. W. Hotell, personal communication, September 14, 1998). To compound the problem for fire chiefs, the DoD was in the midst of reducing personnel as a result of the breakup of the Warsaw Pact and a congressionally mandated review of active duty force strengths, better known as Defense Management Review Determinant (DMRD) 967. This review and reduction of forces presented significant difficulties in increasing manpower authorizations for any USAF career field, effectively preventing fire protection leadership from winning support for a dedicated HSO position had they attempted any such action.

The primary driver for a HSO is the increased emphasis on safety and risk management within fire protection. NFPA requires the HSO to "…manage the fire department occupational safety and health program" (NFPA 1521, 1997, section 2-1.1). These functions include risk management; enforcing laws, codes and standards; training and education; accident prevention; accident investigation, procedures, and review; records management and data analysis; safety of apparatus; equipment; facilities; health maintenance; medical liaison; occupational safety and health committee; infection control; critical incident stress management; post incident analysis; and incident scene safety (NFPA 1521, 1997, chapter 3). By using the checklist in Appendix B of NFPA 1500 (1997), the HSO inspects all areas of the fire organization and identifies areas of non-compliance within the department. In the USAF, when an area of NFPA 1500 is identified as being non-compliant, an operational risk management (ORM) analysis must be completed and forwarded to the highest levels of USAF fire protection. The HSO is the primary catalyst for the ORM as the Health and Safety Program Manager.

As USAF fire departments begin to assume more responsibilities, such as medical response operations, safety and health issues are becoming more pervasive. "Just staying abreast of the federal and local mandates to promote worked safety in terms of hazardous materials and infection control alone can be overwhelming. Add the many other aspects of safety that must be addressed in the emergency services, and it is easy to see why the need for a dedicated safety officer exists" (Sachs, April 1994, p. 87). Lee determined that a HSO will be needed to be a full-time advocate for department safety in non-emergency and emergency operations (Lee, p. 6). By authorizing a HSO, fire departments can provide a dedicated individual to manage the program without responsibility for other functions/programs, such as training. Non-emergency issues can be effectively addressed in a proactive environment rather than being reactive, as is found in today's departments (Lee, p. 6).

The *Executive Development* course offered as part of the NFA Executive Fire Officer Program provided guidance for this applied research paper. Issues covered in Unit 11, Legal Issues, provided a stimulus to approach the responsibilities of the fire chief in providing for the safety of the members of the department.

LITERATURE REVIEW

The literature review involved resources obtained from the NFA LRC, NFPA standards, recurring periodicals such as *Fire Chief*, *Fire Engineering* and *Firehouse*, and DoD Instructions, Manuals, and Standards, some of which were found on the Internet.

To ensure a common understanding of terminology, NFPA 1521 (1997) was used as the primary document in defining the following positions;

Health and Safety Officer. The member of the fire department assigned and authorized by the fire chief as the manager of the safety and health program and who performs the duties and responsibilities specified in this standard. This individual can be the incident health and safety officer or it can also be a separate function.

Fire Department Safety Officer. Functions comprised of the health and safety officer and the incident health and safety officer. These roles can be performed by one member or several members as designated by the fire chief.

Section 2-1.3 of NFPA 1521 (1997) is clear in the requirement that, "Each fire department shall have a designated health and safety officer. The health and safety officer shall be permitted to be assigned as a full-time or part-time position, depending on the size and character of the fire department, as determined by the fire chief." A point-by-point review of the duties of the HSO according to NFPA 1521 (1997) show that the HSO has over 80 broad duties and responsibilities. Some of these duties involve emergency operations, administration, procurement, medical evaluation, training, risk assessment, and investigation. Section 2-5 of NFPA 1500 (1997) also addresses duties and responsibilities of the HSO. Though all portions of NFPA 1500 are important, one paragraph defines the HSO's major function within the fire organization. "The fire department health and safety officer shall be responsible for the management of the occupational safety and health program" (NFPA 1500, 1997, section 2-5). According to *The American Heritage Dictionary of the English Language, Third Edition* (1996), a manager is identified as, "One who handles, controls, or directs…" This places the task of

directing and controlling the department safety and health program with the HSO, who must adhere to the requirements of NFPA standards in implementing the program.

"The only reason for establishing a safety officer position, aside from the specialized expertise an individual might have developed with certified safety training and/or experience, is that safety is his sole assignment" (Angione, 1995, p. 20). Assigning additional duties to the HSO contradicts this assessment, as was identified by Garry Lee, Assistant Chief for the Muscatine (IA) FD. Lee investigated the problem his fire department was experiencing because of the lack of a dedicated HSO. He found that because a permanent HSO position was not established, only a small percentage of non-imminent safety concerns were addressed in the administrative area (p. 6). He also identified a weakness in the management of records, indicating that records needed to be centralized and maintained by the HSO (p. 6). Section 2-7 of NFPA 1500 (1997) identifies specific record-keeping requirements that the HSO must follow for both emergency and non-emergency records. Failure to stay current in this administrative area weakens the overall program. Lee's final determination was that a permanent HSO would solidify important job responsibilities, bringing him to the conclusion that the Muscatine FD needed a permanent HSO (p. 6).

Lee's analysis of his department's situation is in line with the assessments of other senior fire officers. "A fire department will reap many benefits by developing and implementing a safety officer. These include fewer and less severe accidents, injuries and illnesses; lower risk management or insurance premiums; and less damage to equipment and apparatus. As safety is good business, the safety officer position is a cost-effective

function" (Loftin, 1992, p. 43). Loftin's analysis of the effectiveness of the HSO is consistent with many fire professionals, both before his determination was made, and after.

As far back as 1988, the HSO position was recognized as being critical to the well being of the fire organization. In that year, FDNY Battalion Chief Larry Hatton wrote, "The key to choosing a safety officer is that he or she be allowed to dedicate sufficient time to completely fulfill the role. Other duties must not interfere with this function" (p. 65). He also said, "…the person chosen must be able to perform primarily as a safety officer" (p. 65). These statements reinforce the need for a dedicated HSO and provide insight on the importance for such a position from a senior officer in one of America's most active, and respected, fire organizations.

In the Air Force, fire departments must follow established policy guidance for the operation of fire organizations. Department of Defense Instruction (DoDI) 6055.6, DoD Fire and Emergency Services Program, contains the basic guidance for emergency services with the DoD. It covers such areas as communications, response times, apparatus, and staffing. Staffing requirements for vehicles, management and prevention are listed, but nowhere has staffing for a HSO been established. However, the standard says, "…Procedures shall be implemented in accordance with nationally recognized standards and integrated emergency management systems to prevent loss of life, injury, and property damage;…" (DoDI 6055.6, 1994, p. 8). This supports the requirement for all DoD fire departments to conform to national consensus standards as stated in the National Technology Transfer Act of 1995, and it illustrates the importance the DoD places on safety.

AFMS 44EF, attachment 5, more precisely defines the requirements for staffing USAF fire departments. This attachment identifies the "Core Vehicle Set/Manpower Requirements" for all departments, and clearly indicates that there is no HSO position authorized for any Air Force fire department (AFMS 44EF, 1996, p. 25). Likewise, Air Force Instruction (AFI) 32-2001, Fire Protection Operations and Fire Prevention, outlines program elements for fire protection. In paragraph 3.1.2., direction is given regarding "…minimum acceptable staffing and equipage requirements" (AFI 32-2001, 1997, p. 3). The reader is referred to back AFMS 44EF for staffing requirements, which has already been determined to be void of any HSO authorizations. AFI 32-2001 also requires the senior fire official from an Air Force fire department to assign an Incident Safety Officer to fire incidents off DoD installations when the civilian agency has not done so (p. 4). This further reinforces the importance of the HSO.

Because USAF fire departments must adhere to NFPA standards, there are additional standards that apply to the issue of the HSO. According to Section 3-2.2.2 of NFPA 1561 (1997), a HSO shall have the authority to alter, suspend, or terminate activities that he/she judges to be unsafe or involve an imminent hazard. NFPA 1021 (1997) states, "One of the fire officer's primary responsibilities is safety both on the fire ground and during normal operations…" (Appendix A-2-7, 1997)

Having established the importance placed on safety, the method used by fire chiefs to implement the program requirements required identification.

PROCEDURES

Methodology

A questionnaire was developed (see Appendix) and sent to fire departments within USAFE to identify the methods employed by fire chiefs to meet the HSO requirement within their departments, and their opinion regarding the assignment of a dedicated HSO position to each department.

The literature review was also used. Sources of information from the NFA LRC, recurring periodicals, NFPA standards, and DoD instructions, manuals and standards were used in this effort. The focus of the review was to determine the extent of the HSO's responsibilities, then compare them to the RAF Mildenhall HSO's role as found within a typical Air Force fire department. The objective was to identify the responsibilities specifically required of the HSO in all areas of the fire department and consider the extent of the implementation of those responsibilities for the RAF Mildenhall Fire Department.

Additionally, an interview with the Chief of AF Fire Protection was conducted during the DoD Fire Chief's conference held in Louisville, KY, in September 1998.

First, responsibilities of the HSO according to national level standards were defined and contrasted to the RAF Mildenhall Fire Department. Then, the questionnaires received from 9 USAFE fire departments were reviewed to compare the inputs of the fire chiefs from those departments to get an overall picture of the approach they were using to meet the responsibilities of the HSO, outlined in the research documents. The questionnaires also asked the fire chiefs to provide their opinion regarding the assignment of a dedicated HSO.

The next step was to look at the responsibilities of the HSO and compare those responsibilities with the responsibilities of other management staff, such as training, fire prevention and operations. This was undertaken to see if the responsibilities assigned other staff personnel were at a level that would allow fair and equal distribution of the HSO's duties in this way.

Limitations

Results from the questionnaire were limited to the sample of departments located within USAFE, and the duties and responsibilities of fire protection staff at the RAF Mildenhall Fire Department. Other bases around the world might have more extensive, or less detailed, responsibilities for department staff based on the mission of their wing. Additionally, the size of a department may also affect the outcome of the research.

Not all USAFE departments responded to the questionnaire, leaving some uncertainty as to how those missing departments fulfill the safety role.

RESULTS

Answers to Research Questions

1. What manpower authorizations currently exist for USAF fire departments?

Air Force fire departments are authorized staffing based on several documents. The foundation document used in determining staffing is DoDI 6055.6. This document defines the number vehicle positions that will be staffed, how many management staff are allocated to a department, and how many fire prevention inspectors are assigned (DoDI 6055.6, 1994, p. 16-18). This document applies to the entire DoD, which means that the staffing for all branches of the military are affected by the requirements set forth in the document.

AFMS 44EF further quantifies staffing levels for USAF fire departments by assigning manpower determinant factors that consider days off, meeting appointments on duty, temporary duty assignments away from the primary duty station, and all forms of leave (P. Graddon, personal communication, October 30, 1998). The current manpower determinant is 2.581 and it is used to multiply the number of staffing positions authorized to determine the final overall staffing for a department. For example; if there are 20 staffing positions authorized, those positions are multiplied by 2.581, giving the department an overall staffing level of 52 after rounding up to the next whole number. Currently, the basic, or "core," department is 55 people. A department's overall staffing can be affected by positive and negative mission variances, which are included in the AFMS, resulting in more or less staffing depending on the specific variance. There are positive variances that have been approved for the addition of supplemental structural or aircraft rescue and fire fighting vehicles, additional fire stations, and fire prevention inspectors. The only negative variance applies to installations without a flying mission. There are also numerous variances that were reviewed and disallowed prior to the publishing of the standard. Some of these disapproved variances were fire extinguisher maintenance, fire prevention engineering, and water resupply vehicle (AFMS 44EF, 1996, p. 19-23). It's interesting to note that nowhere in the standard does it indicate that the HSO was considered. This is evident in the fact that the HSO position isn't listed as either an approved or disallowed variance (AFMS 44EF, 1996, p. 19-23).

At overseas installations, such as USAFE, where local national fire fighters are also employed in the department, additional staffing calculations are accomplished to determine the number of local national fire fighters and the number of military fire fighters

authorized for the department. Though this affects the final staffing figures, it in no way affects the issue of providing for a dedicated HSO.

The only exception to the HSO authorization can be found at RAF Mildenhall. At this location there is a dedicated HSO assigned, though his primary responsibilities involve the management of Ministry of Defense (MOD) Fire Service personnel issues for the British fire fighters assigned to the department. HSO duties were assigned to this person to provide for the safety of department members through a dedicated HSO. The HSO is a MOD Station Officer who is assigned to the fire department in accordance with MOD regulations, which require a Station Officer when more than 35 MOD fire fighters are assigned to a department. The RAF Mildenhall fire department has 38 MOD fire fighters assigned and therefore earns the Station Officer position as a "supplemental" position within the department. This position is not based on fire fighting or fire prevention activities, but is strictly a management position. Therefore, the fire chief determined that the Station Officer could complete his duties in managing the few MOD issues that arise, as well as fulfill the duties of the department HSO (S. Robertson, personal communication, August 1997). As a result, the RAF Mildenhall fire department is the only department within USAFE to have a dedicated, authorized position for a HSO, a position that is not taken from somewhere else in the department and converted into a HSO position, though the foundation for the position lies in other requirements.

2. What functions are involved in the HSO's duties?

Research revealed that the HSO's duties are wide ranging. The 1997 edition of NFPA 1521 identifies those duties as; requiring a knowledge of current laws, codes and standards; occupational safety and health hazards involved in emergency operations;

current principles and techniques of safety management; current health maintenance and physical fitness issues; and infection control practice and procedures. The HSO must also identify and correct safety and health hazards, and imminent hazard situations. In nonimminent hazard situations, the HSO must develop actions to correct the situation within the administrative process of the department.

Chapter 3 of NFPA 1521 (1997) further identifies duties and responsibilities of the HSO. Risk management is a key role for the HSO and requires extensive attention to detail. The HSO must remain attuned to current laws, codes, and standards. Training and education, accident prevention, accident investigation, and record management and data analysis are major components of an effective safety program. Apparatus and equipment analysis, before purchasing and throughout the life of the item, must be closely monitored by the HSO. Facility inspection, health maintenance, the occupational safety and health committee, infection control, critical incident stress management, and post incident analysis are also pivotal factors that impact the safety of a department's members and thereby require a HSO's focus. In the Appendix (Section A-3-1.1, 1997), NFPA 1521 says, "Risk management is a vital component to any organization's operation, especially a fire department."

During emergency scene operations, a HSO is essential in assisting the incident commander in maintaining a safe condition for operating members. NFPA 1521 indicates the responsibilities of the HSO in this situation involve scene safety, determination of building stability, evaluation of fire conditions and the probability of backdraft or flashover, and the entry and egress routes of structures (NFPA 1521, 1997, p. 9). In emergency medical operations, the HSO ensures the requirements of the infection control program are

followed, and that incident scene rehabilitation and critical incident stress management are established, especially at mass casualty incidents (p. 9). At hazardous materials incidents the HSO provides input on risk assessment and member safety, ensures a safety briefing is developed and briefed to on-scene members, ensures that hot, warm, decontamination, and other zones are clearly marked, and determines rehabilitation, accountability and intervention needs (p. 9). For long-term operations, the HSO ensures food, hygiene facilities, and other special needs are provided for (P. 9). The HSO also investigates accidents and prepares a written report for the post-incident analysis (p. 10).

3. How do fire departments currently manage their safety program?

The questionnaires completed by the fire departments within USAFE indicate an overwhelming need for a dedicated HSO. Nine fire departments responded to the questionnaire. Department size ranged from below 50 to over 200. Five departments have full-time, dedicated HSOs. These 5 departments all have staffing over 50. Four of these departments have staffing between 90 and 110; the other department has over 200. Of the remaining 4 departments, 2 are staffed over 50 and 2 below 50. All four of these departments cited a lack of staffing to permit a full-time, dedicated HSO. For the five departments that have a dedicated HSO, each one of them fill the position by "taking it out of hide," reducing staffing in another function of the department, such as operations, to fill the safety position. Seven of the nine departments surveyed indicate a dedicated, full-time HSO is needed in their department. One of the departments that indicated a dedicated HSO was not needed based their decision on the lack of work for a HSO within their department. This department's staffing is under 50. The other department that responded negatively to the need for a HSO did not provide any rationale for that decision.

The questionnaire clearly shows all fire departments in USAFE manage their safety program by filling the HSO position with a fire fighter who is actually earned for the department in another area or function, such as fire operations, training, or fire prevention. This is true regardless whether or not they believe a full-time HSO is needed in their department.

4. What guidelines are needed for developing a full-time HSO position description?

The first thing that must occur in developing a position description is a thorough review of NFPA standards 1021, 1500, 1521, and 1561; AFMS 44EF; AFI 32-2001; DoDI 6055.6; and recurring publications such as *Fire Engineering* and *Firehouse*. From these documents the main functions of the position can be recorded. It is vital to record these broad, all-encompassing requirements to provide the foundation for the fire chief to develop more specific, detailed responsibilities that must be identified to ensure an effective program is provided.

The next step is to quantify the requirements for each of the categories identified. These requirements must include emergency and nonemergency functions, special operations, medical and fire operations, and training and investigation responsibilities. These should be focused on the mission of the specific department and the category of fire fighters employed (career versus volunteer, all military versus military/local national civilian mix, etc.) as this may affect the application of safety requirements and training needs. In USAFE, requirements of the host nation must also be reviewed and incorporated into the department safety program to meet national requirements for foreign national fire fighters. In the US, state and federal requirements must be identified and built into the position description.

The final step is to complete the position description with all of the identified requirements listed. It is important to end the position description with the statement, "Other assigned duties as required." This will provide the employer with the ability to assign the HSO other safety related duties that were not specifically identified in the position description, but that may be necessary in the future to provide for a comprehensive program, while giving the fire department the flexibility to adapt to a change in standards, like NFPA 1500 revisions.

DISCUSSION

The importance of the HSO position is undisputed throughout the fire service. According to Loftin (1992), "A fire department will reap many benefits by developing and implementing a safety officer. These include fewer and less severe accidents, injuries and illnesses; lower risk management or insurance premiums; and less damage to equipment and apparatus. As safety is good business, the safety officer position is a cost-effective function" (p. 43). As budgets continue to decline and requirements for services increase, the fire service must constantly strive to use its resources more efficiently.

Over the last 10 years, fire departments have been placing emphasis on operating their organization as a business. Many organizations, including the USAF, have focused on "Total Quality Management" and applied the Malcolm Baldrige National Quality Awards criteria to their "business" to assess the level of quality service being provided to the members of their community. Fire chiefs have written books on customer service, the most well known being Alan Brunicini of the Phoenix, AZ, Fire Department. His approach to providing fire protection to the City of Phoenix appears to be considered "good business"

based on his success as a lecturer and author. Loftin's statement, "…As safety is good business, the HSO position is a cost-effective function.", rings loud and clear to organizations struggling to survive in many jurisdictions. But, providing for the safety of department members is not only good business, it also protects the jurisdiction from litigation, reduces lost time due to injury, and reduces medical expenses and overtime costs to fill vacant positions. Safety is indeed good business. Meyer (1992) observed that, "Opinions on NFPA 1500 vary, but as a nationally recognized standard, it cannot be ignored. It is a reference document to which any department will find itself compared in issues of litigation involving personnel protection" (p. 44).

When we think of a Fire Department HSO, many times the first image that comes to mind is an emergency scene operation. However, many fire departments are discovering that the lack of a dedicated HSO is resulting in a lack of focus on non-imminent safety issues. In the Muscatine (IA) FD, Lee identified that only a small percentage of non-imminent safety concerns were addressed in the administrative area (p. 6). He further identified a weakness in the management of records, indicating that records needed to be centralized and maintained by the HSO (p. 6). This indicates that, though the emergency functions of the HSO were current, record keeping and documentation of other critical safety matters were not receiving the attention they needed to provide an overall sound safety program. He determined that a permanent HSO would solidify important job responsibilities, concluding that the Muscatine FD needed a permanent HSO (p. 6).

To try and quantify the need for a HSO within AF fire departments, a questionnaire was undertaken to assess the current situation within fire departments in USAFE (see Appendix). The results of the questionnaire indicated an overwhelming need for a

dedicated HSO. Five departments with staffing of 90 to 200 have full-time, dedicated HSOs. Each of these departments are categorized by the USAF as MOBs. This means they are key installations with major flying missions, industrial facilities, munitions storage areas, and large communities. The remaining four departments cited a lack of staffing to permit a full-time, dedicated HSO. These departments are on small installations with simple missions and a small community. For the five departments that have a dedicated HSO, each one of them fill the position by "taking it out of hide," reducing staffing in another function of the department, such as operations, to fill the job full-time. Seven of the nine departments surveyed indicate a dedicated, full-time HSO is needed in their department. One of the departments that indicated a dedicated HSO was not needed based their decision on the lack of work for a HSO within their department. The other department that responded negatively to the need for a HSO did not provide any rationale for that decision.

The fact that five MOB departments have placed a fire officer in a dedicated HSO position indicates their focus, and the importance they place, on safety within the fire organization. The diverse operations that occur on these MOBs make it "good business" to employee a dedicated HSO.

For each of the nine departments surveyed, failure to have a HSO and a safety program, in the event of an injury either on or off the fire ground, could result in serious legal implications for the fire organization, and in the case of the military the DoD. It is therefore essential, for both the well being of the fire fighter and the jurisdiction, that a HSO provide for the safety and health of all members of the fire department under all conditions. As Meyer (1992) said, "Opinions on NFPA 1500 vary, but as a nationally recognized standard,

it cannot be ignored. It is a reference document to which any department will find itself compared in issues of litigation involving personnel protection" (p. 44).

This concept of dedicating someone to being the department HSO is not a new concept. Major fire organizations identified the need for safety as a "stand alone" function over 10 years ago. "The key to choosing a Health and Safety Officer is that he or she be allowed to dedicate sufficient time to completely fulfill the role. Other duties must not interfere with this function." and, "…the person chosen must be able to perform primarily as a Health and Safety Officer" (Hatton, 1988, p. 65). This is supported by several NFPA documents.

NFPA 1500 (1997) says, "The fire department Health and Safety Officer shall be responsible for the management of the occupational safety and health program." NFPA 1521 (1997) says, "Each fire department shall have a designated Health and Safety Officer." It goes on further and states, "A Health and Safety Officer shall be assigned to manage the fire department occupational safety and health program." What does it mean to manage or be a manager? According to the *American Heritage Dictionary* (1996), a manager is "One who handles, controls, or directs…" Therefore, the HSO is responsible for controlling and directing the fire department safety and health program, in the same manner that the battalion chief controls and directs fire suppression forces.

The HSO maintains records, performs inspections of facilities and conducts risk assessments, develops programs to assist fire fighters in maintaining healthy lifestyles, and has significant authority during emergency operations when discovering imminent safety problems. This places the HSO in the management staff of the department and a key figure in department operations. At the five MOBs, the level of responsibility for

members of the department management staff is such that placing the huge workload required of a HSO on another officer would render the program, if not the individual, impotent. As an example, consider the following situation as it applies to the RAF Mildenhall fire department.

In the RAF Mildenhall fire department, there are 92 personnel assigned. All 92 people are enrolled in formal training courses to attain DoD mandated levels of certification to such levels as Fire Officer II and Airport Fire Fighter. The courses require instruction by supervisors and by the training officer, and the training officer must also track the student's progress. The job is so extensive that there are two people assigned to the training section of most fire departments, including RAF Mildenhall, to ensure all training requirements are met for all areas and functions of the department. This eliminates the training officer from consideration as the HSO.

The operations chiefs are responsible for managing a shift of 38 fire fighters, combined military and MOD, as well as 20 emergency response vehicles. In a civilian department their duties mirror those of a battalion chief. The expanse of these requirements also eliminates the operations chiefs as the HSO.

The only officers remaining in the RAF Mildenhall fire department are the fire prevention chief, deputy chief, and fire chief. Each of these people has significant duties in managing the department or the fire prevention program for the installation, or both, and therefore is unable to absorb any additional duties.

NFPA 1521 (1997) allows the fire chief to have a health and HSO as either "…a full-time or part-time position, depending on the size and character of the fire department." This appears to be designated in this manner to allow small departments, such as rural

volunteer departments or small support installations in the military, who are able to manage their health and safety program as an additional duty to do so. To dictate that a full-time HSO be appointed in each department would be fiscally restrictive for some jurisdictions, and a waste of valuable resources for departments that have such a small number of fire fighters that health and safety issues can easily be managed by an established department fire officer. This provision permits the senior leadership of USAF Fire Protection to "legally" omit a HSO authorization from established manning standards, putting the "monkey" on the back of the fire chief to meet the requirements of the standards with the staffing authorized.

In the Appendix (Section A-2-7, 1997), NFPA 1021 indicates that "One of the fire officer's primary responsibilities is safety both on the fire ground and during normal operations…." This illustrates that safety is an integral part of leadership and is taught from an early age within fire protection. It provides fire officers with more awareness for safety issues, but it also arms them with the knowledge of the importance safety plays in fire fighting. They may look upon the lack of a dedicated HSO as an indication that management is not committed to providing for the safety of the members of the department.

Without a HSO authorized, USAF fire fighters have seen their occupational safety and health improve since the adoption of NFPA 1500, through improvements in vehicle safety, protective clothing and equipment, infectious disease control engineering, etc. The inclusion of a HSO authorization, allowing an individual to focus all of their efforts to improving safety within their organization, can only make the occupational safety and health environment even better.

A review of NFPA 1521 (1997) indicates that the HSO has over 80 wide-ranging duties and responsibilities involving such functions as emergency operations, administration, procurement, medical evaluation, training, risk assessment, and investigation. When adding the duties required in a military department in Europe of adhering to US and foreign safety requirements, it quickly becomes evident that assigning the HSO any other duties can over-burden the HSO and jeopardize the effectiveness of the department's program. The end result of which would be increased safety losses and decreased operational capability.

According to NFPA 1561 (1995), a HSO shall have the authority to alter, suspend, or terminate activities that he/she judges to be unsafe or involve an imminent hazard. The HSO is a member of the command staff within the incident management system and operates in direct support of the incident commander, contributing to the overall management of the incident (NFPA 1561, 1995, p. 8). A good HSO is a tremendous asset to the Incident Commander and can stimulate a positive operational outcome.

The research clearly indicates that a HSO is vital to the effective operation of a fire department. Providing for the safety of the members results in fewer injuries, which in turn results in less lost duty time and reduced medical expenses for the jurisdiction. It also illustrates that the HSO has a tremendous workload, which would be difficult for another officer to absorb in a department with a large number of fire fighters, or one with a large "mission," or both.

By establishing an authorized HSO position within USAF fire departments, fire chiefs should have more effective safety programs. This determination is based on the presumption that putting safety at the top of the priority list will reduce injury and increase

worker safety and output. It may be argued that assigning safety program management as an additional duty reduces the importance of safety in the organization, thereby placing fire fighters at greater risk for injury.

RECOMMENDATIONS

Fire chiefs should continue to assign a dedicated HSO when authorized staffing permits. They should also continue to address the issue with senior USAF fire protection leaders at conferences, during video teleconferences, and in personal communications.

Senior fire protection leaders should take the following steps to determine the need for specific HSO authorizations within the USAF:

1. Review the specific duties and responsibilities of the HSO, to include unique requirements necessary at overseas installations. These duties should be contrasted to the duties of established fire department managers to determine the extent to which additional taskings can be absorbed into established position descriptions. This should be done in coordination with a manpower study to evaluate all duties and functions assigned to fire protection managers.

2. Develop a generic position description that meets all requirements identified in NFPA standards, and that complies with federal requirements, such as the Occupational Safety and Health Administration (OSHA) standards.

3. Discuss with the USAF Fire Protection Quality Council (FPQC) the criteria that is most effective in deciding when an HSO position is earned and will be authorized. An example is; when over 55 fire fighters are assigned to a department, a HSO position will be authorized.

4. Review the FPQC inputs with fire chiefs at active USAF installations to ensure the concept is sound and based on realistic data. This gives fire officers “in the field” the chance to evaluate the effectiveness of the decision as it applies to an active department; to “give it a reality check.”

5. Senior USAF fire protection leaders should establish the HSO position as an authorized manpower position.

Further study of this issue could be undertaken to better document how USAF fire departments are dealing with the HSO requirement. Including more departments on the mailing list for the questionnaire would incorporate a wider field of data. Additionally, the questionnaire could be expanded to gauge the point at which a dedicated HSO position would be needed.

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APPENDIX

EXECUTIVE FIRE OFFICER PROGRAM
APPLIED RESEARCH PROJECT QUESTIONNAIRE

Please complete the following questions as they pertain to your department. Where requested, provide your professional opinion. Thank you in advance for your assistance.

1. What is the size of your department?

    a. less than 50
    b. 50-100
    c. 100-150
    d. more than 150

    ANSWER:

2. Do you have a full-time, dedicated health and safety officer?

    a. Yes
    b. No

    ANSWER:

3. If you answered “No” to question #2, identify why.

    a. not enough staffing
    b. not enough work for full-time position
    c. not important enough to commit to a full-time position

    ANSWER:

4. If you answered “Yes” to question #2, identify how you accomplish it.

    a. take a person “out of hide”
    b. overhire or temporary hire
    c. performed by another agency/office
    d. authorized position outside the AFMS (provided by squadron, base, etc.)

    ANSWER:

5. In your opinion, is a full-time health and safety officer position needed in your department?

a. Yes
b. No

ANSWER: